

Miniature Power PCB Relay MSR

- 1 pole 8/10A, 1form C (CO) or 1 form A (NO) contact
- High inrush currents with AgSnO₂ contacts (TV4 0 65A)
- 4kV/8mm coil-contact
- Reinforced insulation (protection class II)
- Ambient temperature up to 85°C at 8A
- Plastic materials according to IEC 60335-1 (domestic appliances)



F0143-E



Typical applications

HVAC, interface technology. PLC's, power supplies, TV-/monitor control, domestic appliances, Hi-Fi products, timers

Approvals

VDE REG.-Nr 3919, UL E214024
Technical data of approved types on request

Contact Data

| | |
|---|--------------------------------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400VAC |
| Rated current | |
| versions A,B | 8A |
| versions C, D | 10A |
| Limiting making current, max 4s, df 10% | 15A |
| version A302, max 20ms | 65A |
| Breaking capacity max. | 2000VA |
| Contact material | AgSnO ₂ , AgNi90/10 |
| Frequency of operation, with/without load | 6/1200min-1 |
| Operate/release time max. | 10/5ms |
| Bounce time max., form A/form B | 3/10ms |

Contact ratings

| Type | Contact | Load | Cycles |
|-------------------|---------|------------------------------------|---------------------|
| IEC 61810 | | | |
| V23061-A1***-A302 | A (NO) | 8A, 250VAC, cosφ=1, 85°C | 100x10 ³ |
| V23061-C2***-A802 | A (NO) | 10A, 250VAC, cosφ=1, 85°C | 100x10 ³ |
| V23061-C2***-A802 | A (NO) | 5A, 250VAC, cosφ=1, 105°C | 100x10 ³ |
| UL 508 | | | |
| V23061-A1***-A302 | A (NO) | TV4, Tungsten, 120VAC, 40°C | 25x10 ³ |
| V23061-A1***-A302 | A (NO) | Pilot duty, A300, 40°C | 6x10 ³ |
| V23061-C2***-A802 | A (NO) | 10A, 240VAC, general purpose, 40°C | 30x10 ³ |
| EN60730-1 | | | |
| V23061-A1***-A302 | A (NO) | 2(2)A, 250VAC, 85°C | 100x10 ³ |
| V23061-C2***-A802 | A (NO) | 4(4)A, 250VAC, 85°C | 100x10 ³ |

Mechanical endurance, DC coil 10x10⁶ operations



Coil Data

| | |
|-------------------------------------|------------------|
| Coil voltage range | 3 to 60VDC |
| Operative range, IEC 61810 | 2 |
| Coil insulation system according UL | classA or classF |

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% ¹⁾ | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-------------------------------------|---------------------|
| 001 | 3 | 2.1 | 0.3 | 40 | 225 |
| 002 | 5 | 3.4 | 0.5 | 118 | 212 |
| 003 | 6 | 4.1 | 0.6 | 165 | 218 |
| 004 | 9 | 6.1 | 0.9 | 364 | 223 |
| 005 | 12 | 8.2 | 1.2 | 652 | 221 |
| 007 | 24 | 16.3 | 2.4 | 2270 | 254 |
| 009 | 48 | 32.6 | 4.8 | 8790 | 262 |
| 010 | 60 | 40.8 | 6.0 | 15265 ¹⁾ | 236 |

1) Coil resistance ±15%
All figures are given for coil without pre-energization, at ambient temperature +23°C
Other coil voltages on request



Insulation Data

| | |
|------------------------------------|----------------------|
| Initial dielectric strength | |
| between open contacts | 1000V _{rms} |
| between contact and coil | 4000V _{rms} |
| Clearance/creepage | |
| between contact and coil | ≥8/8mm |
| Material group of insulation parts | IIIa |

Miniature Power PCB Relay MSR (Continued)

Other Data

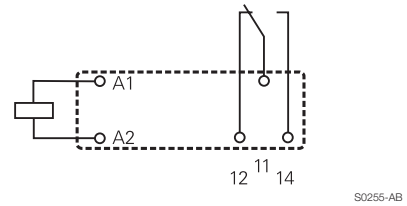
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

| | | |
|--------------------------------------|-----------------------------|--|
| Ambient temperature | - 40 to +85°C | |
| Category of environmental protection | IEC 61810 | |
| | RTII - flux proof, | |
| | RTIII - wash tight | |
| Vibration resistance (functional) | 10/4g | |
| form A (NO) / form B (NC) | | |
| Vibration resistance (destructive) | 20/5g | |
| form A (NO) / form B (NC) | | |
| Shock resistance (destructive) | 100g | |
| Terminal type | PCB-THT | |
| Weight | 11g | |
| Resistance to soldering heat THT | IEC 60068-2-20 | |
| | RTII: 270°C/10s | |
| | RTIII: 260°C/5s | |
| Packaging/unit | tube/20 pcs., box/1000 pcs. | |

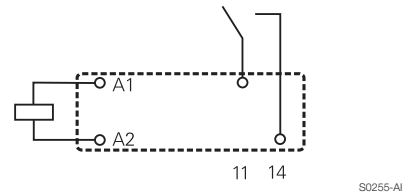
PCB layout / terminal assignment

Bottom view on solder pins

1 form C, 1 CO contact, 3.2mm

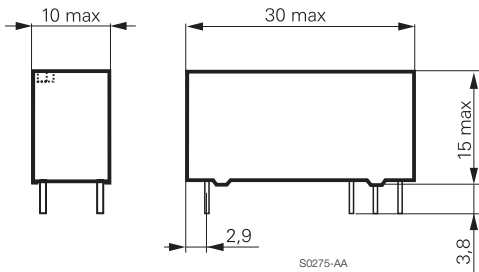


1 form A, 1 NO contact, 5mm

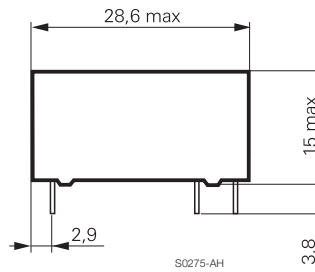


Dimensions

1 form C, 1 CO contact, 3.2mm



1 form A, 1 NO contact, 5mm



Miniature Power PCB Relay MSR (Continued)

| | | | | | | | | | | |
|-------------------------------|--|--|--|---------------------|---------------------|---------------------------------|------------|-----------|----------|-----------|
| Product code structure | | Typical product code | | V23061 | -A | 1 | 007 | -A | 3 | 02 |
| Type | | V23061 Miniature Power PCB Relay MSR | | | | | | | | |
| Version | | A 1 form A contact (1 NO), UL-class A B 1 form C contact (1 CO), UL-class A C 1 form A contact (1 NO), UL-class F D 1 form C contact (1 CO), UL-class F | | | | | | | | |
| Version | | 1 Wash tight | | 2 Flux proof | | | | | | |
| Coil | | Coil code: please refer to coil versions table | | | | | | | | |
| Contact system | | A Standard | | | | | | | | |
| Contact material | | 3 AgSnO ₂ | | | 8 AgNi 90/10 | | | | | |
| Contact configuration | | 01 1 form C (CO) contact | | | | 02 1 form A (NO) contact | | | | |

Other types on request

| Product code | Version | Contacts | Contact material | Coil | Part number |
|-------------------|------------|--------------|--------------------|-------|-------------|
| V23061-A1002-A302 | Wash tight | 1 form A | AgSnO ₂ | 5VDC | 1393222-4 |
| V23061-A1003-A302 | | 1 NO contact | | 6VDC | 1393222-9 |
| V23061-A1005-A302 | | | | 12VDC | 2-1393222-0 |
| V23061-A1007-A302 | | | | 24VDC | 3-1393222-9 |
| V23061-B1002-A301 | Flux proof | 1 form C | AgNi90/10 | 5VDC | 7-1393222-2 |
| V23061-B1005-A301 | | 1 CO contact | | 12VDC | 9-1393222-1 |
| V23061-B1007-A301 | | | | 24VDC | 1-1393223-7 |
| V23061-B1009-A301 | | | | 48VDC | 3-1393223-7 |
| V23061-C2001-A802 | | 1 form A | | 3VDC | 5-1416200-3 |
| V23061-C2002-A802 | | 1 NO contact | | 5VDC | 5-1416200-4 |
| V23061-C2003-A802 | | 6VDC | 5-1416200-5 | | |
| V23061-C2004-A802 | | 9VDC | 5-1416200-6 | | |
| V23061-C2005-A802 | | 12VDC | 5-1416200-7 | | |
| V23061-C2007-A802 | | 24VDC | 5-1416200-8 | | |
| V23061-C2009-A802 | | 48VDC | 6-1416200-0 | | |
| V23061-C2010-A802 | | 60VDC | 6-1416200-1 | | |
| V23061-D2001-A801 | Flux proof | 1 form C | AgNi90/10 | 3VDC | 6-1416200-2 |
| V23061-D2002-A801 | | 1 CO contact | | 5VDC | 6-1416200-3 |
| V23061-D2003-A801 | | | | 6VDC | 6-1416200-4 |
| V23061-D2004-A801 | | | | 9VDC | 6-1416200-5 |
| V23061-D2005-A801 | | | | 12VDC | 6-1416200-6 |
| V23061-D2007-A801 | | | | 24VDC | 6-1416200-7 |
| V23061-D2009-A801 | | | | 48VDC | 6-1416200-9 |
| V23061-D2010-A801 | | | | 60VDC | 7-1416200-0 |